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Copy 20 of 26

28 March 1967

MEMORANDUM FOR THE RECORD

SUBJECT: Minutes, Model 351 Engine Section Mock-up  
Conference (28 March 1967)

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1. This meeting was opened at 0900 hours with comments by [redacted] both of Lockheed ADP. [redacted] stated that the Lockheed participants considered the engine mock-up section as primarily an "engineering tool" for use during buildup of the aircraft. Further, Lockheed comments during this meeting would not necessarily be addressed to all the agenda items listed in the Project Headquarters message.

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2. [redacted] (Project Headquarters) identified the objectives of this meeting as follows:

a. Utilize this gathering as an opportune time to "put a blessing" on the engine installation so that Lockheed could proceed on its work tasks without further delays or interruptions.

b. Discuss and resolve mutual problem areas; those of immediate concern, and those possessing potential impacts.

c. Consider future SAC requirements.

USAF review(s)  
completed.

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d. Satisfy ourselves that we have a usable engine and that the purpose of the meeting has been fulfilled.

3. Attendees next proceeded to Building 351 for a ship-side review of the engine section mock-up. The following is extracted from a narrative prepared by Lockheed on comments/actions and is included in this report for purposes of continuity:

\* \* \*

GENERAL COMMENTS AND ACTIONS

1. Interstage bleed clamps difficult to install.

Action: ADP will investigate lever action clamp (or similar) for one hand installation.

2. Hydro-pump lines difficult to disconnect at pump with engine installed.

Action: ADP will investigate more accessible location for disconnects. May have hoses installed on pump prior to engine installation. This may require addition of a hose support on the engine assembly to align hoses with hole in duct centerbody.

3. Ground start cart hose connection to engine starter requires removal of lower engine access door.

ADP Comment: Lower access door removal is required to service the engine oil system, CSD oil system and install start cart hose. However, ADP will investigate a smaller door within the lower access door for hose connection.

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4. Desirable to have EPR indicator in engine compartment while setting fuel control.

Action: ADP investigating this installation on "C" Model, and Model 351 will defer action until results of "C" installation are known.

5. Engine manuals to follow present "C" Model format.
6. Oil servicing cart for engine and CSD is PMU-29/E and will be supplied from Federal Assets.
7. Headquarters will investigate requirement for CSD test stand and will check out CSD and alternator performance and life on F4C aircraft.

GENERAL COMMENTS ON MODEL 351

1. Desirable to have external interphone jack installed on R.H. side of aircraft.

ADP            External interphone connector provided in  
Comment:    external power receptacle well on R.H.  
             side of aircraft at F.S. 355.

\* \* \*

4. Arrangements were made to have [redacted] and selected maintenance personnel from North Base also review the engine mock-up section.

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5. The group reconvened in the conference room. Except for actual removal and replacement of the CSD and the alternator with engine installed, all other Lockheed agenda topics were considered completed. The meeting was next directed to the following related items:

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a. Constant Speed Drives (CSD) and Alternators:

(1) Are CSD test stands needed and, if so, where? What is the concept of maintenance to be applied on the CSD's at the field and at the plant or vendor's facilities?

(2) [ ] recommended that experience factors first be obtained through the flight test program before attempting to establish the maintenance ground rules.

(3) In the interim, Project Headquarters will solicit data from USAF sources on their experience with CSD's in the F4C program. Recommendations on whether or not to use CSD test stands out in the field will be evaluated and a decision made. The Project Depot will look into procurement of additional CSD's. It was noted Lockheed has 20 each on procurement now. Part numbers for these and other engine components were provided to the Project Depot Representative.

b. Common and Special AGE:

(1) Only significant requirement (and this AGE is being furnished by Lockheed) is installation of new rails on top of the fuselage.

(2) The WPAFB SPO representative was asked to provide Project Headquarters (INFO: Project Depot) with stock number and description on an appropriate oil servicing cart.

c. Other:

(1) The WPAFB SPO Representative indicated general satisfaction by SAC on engine tech data and maintenance manuals. It was requested that the term "unmarked" not be stamped on these publications. Project Headquarters concurred in this request. SAC needs for "work unit codes" were mentioned and these will be discussed further by the interested activities.

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(2) SAC training requirements were discussed briefly. The WPAFB SPO Representative will coordinate the needs with that Command and establish the training program requirements. This subject is recognized as some time in the future; however, Lockheed indicated no special problems are foreseen in developing a training course. Field Training Detachment (FTD) or whatever field team concept is developed would most probably be managed through [redacted] office. A point of concern will be the level of security clearances to be given these training-type tech reps.

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6. [redacted] (Pratt & Whitney) gave a resume of problems with sticking bleed valves and the current corrective actions. These are proving satisfactory and it was noted that by the time we get into the Model 351 installations, the problem should have been thoroughly resolved. [redacted] considered the Model 351 engine installation to be good and, in some areas, better than in the present "C" model.

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7. General Comments:

a. Short discussion was held on preventative maintenance, exercising of bleed valves, ground checks, use of dry nitrogen/air, and related maintenance procedures that are now being practiced.

b. Lockheed Van Nuys Representative was asked to review the "Remote EPR Indicator" installation on the "C" Model and submit a proposal to Project Headquarters. Comments were also made relative to difficulty with disconnects for the hydro-pump lines. (Note: These comments are also included within the Lockheed narrative portion in paragraph 3 above).

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d. A consolidated position by Project Headquarters and WPAFB SPO is required in the immediate future concerning operational employments. The quantities of AGE and support equipment to be procured is significantly dependent on the number of operational locations and the assignment pattern of the Articles.

e. "13-B" engines that are coming off production may require additional ground handling equipment. Lockheed (Van Nuys) to submit proposal to Project Headquarters for 15 each Dri-Clad engine bags.

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